

IAP12 Rec'd PCT/PTO 06 SEP 2006

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Tomonari TAGUCHI

Attn: PCT Branch

Application No. New U.S. Patent Application

Filed: September 6, 2006

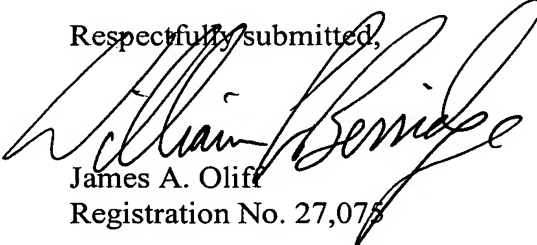
Docket No.: 129316

For: EXHAUST HEAT RECOVERY POWER GENERATION DEVICE AND
AUTOMOBILE EQUIPPED THEREWITH**TRANSMITTAL OF THE ANNEXES TO THE
INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Attached hereto are the annexes to the International Preliminary Report on Patentability (Form PCT/IPEA/409). The attached material replaces the claims in their entirety from page 18 to page 20.

Respectfully submitted,



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CLAIMS

1. (Amended) An exhaust heat recovery power generation device (200) comprising:

5 an exhaust pipe (110) receiving exhaust gas (15) from a heat source (10) and passing the exhaust gas in a prescribed direction;

a cooling pipe (265) arranged along said exhaust pipe to pass a refrigerant for cooling said exhaust pipe;

10 a refrigerant supply unit (230) supplying said cooling pipe with said refrigerant; and

a plurality of thermoelectric power generation stacks (210) attached to said exhaust pipe and said cooling pipe sequentially in a direction in which said exhaust gas flows, wherein:

15 said plurality of thermoelectric power generation stacks each include a plurality of thermoelectric power generation elements (270) formed sequentially in the direction in which said exhaust gas flows;

20 said plurality of thermoelectric power generation elements each generate power corresponding to a difference in temperature between a high-temperature end (271) and a low-temperature end (272) thereof, said high-temperature end and said low-temperature end being attached to said exhaust pipe and said cooling pipe, respectively, at a corresponding site; and

25 said refrigerant supply unit are configured to supply said refrigerant in such a direction that said exhaust pipe and said cooling pipe pass said exhaust gas and said refrigerant, respectively, in opposite directions.

2. (Cancelled)

3. (Amended) The exhaust heat recovery power generation device (200) of

claim 1, wherein each of said thermoelectric power generation elements (270) is arranged to be sandwiched between said exhaust pipe (110) and said cooling pipe (265).

4. (Amended) An automobile comprising:

5 a first driving force generation device (10) using a fuel's combustion energy as a source to generate wheel driving force;

the exhaust heat recovery power generation device (200) as recited in any of claims 1 and 3, said exhaust heat recovery power generation device generating power with said first driving force generation device serving as said heat source; and

10 a source of electric power (20); and

a second driving force generation device (80) using power generated by said exhaust heat recovery power generation device and that supplied from said source of electric power as a source to generate wheel driving force.

15 5. The automobile of claim 4, wherein:

said source of electric power (20) is a secondary battery; and

said exhaust heat recovery power generation device further includes a power converter (220) converting the power generated by said exhaust heat recovery power generation device (200) to voltage charging said secondary battery.

20 6. The automobile of claim 4, further comprising a driving power conversion device (30) converting received power to power driving said second driving force generation device (80), wherein said exhaust heat recovery power generation device (200) further includes a power converter (220) converting the power generated by said exhaust heat recovery power generation device to power input to said driving power conversion device.

25 7. The automobile of claim 4, further comprising:

a power generation device (70) converting at least a portion of said wheel driving force generated by said first driving force generation device (10) to power usable as power driving said second driving force generation device (80); and

5 a control device (90) operative to drive said automobile in accordance with a driver's instructions, wherein:

said source of electric power (20) is a secondary battery; and

10 said control device considers vehicle requirement power (P_v) calculated in accordance with said driver's instructions and required to run the vehicle and charge requirement power (P_{chg}) for maintaining a level of charge of said secondary battery and in addition thereto power (P_h) generated by said exhaust heat recovery power generation device (200) to control said first driving force generation device's operation.